



TRANSMITTAL LETTER
(General - Patent Pending)

Docket No.
9872

In Re Application Of: Ted Christopher

Serial No.
08/746,360

Filing Date
November 8, 1996

Examiner

Group Art Unit

Title: **FINITE AMPLITUDE DISTORTION-BASED INHOMOGENEOUS PULSE ECHO ULTRASONIC IMAGING**

TO THE ASSISTANT COMMISSIONER FOR PATENTS:

Transmitted herewith is:

Information Disclosure Statement
Form PTO-1449

in the above identified application.

- ☒ No additional fee is required.
- ☐ A check in the amount of _____ is attached.
- ☒ The Assistant Commissioner is hereby authorized to charge and credit Deposit Account No. **19-1013** as described below. A duplicate copy of this sheet is enclosed.
- ☐ Charge the amount of _____
- ☒ Credit any overpayment.
- ☒ Charge any additional fee required.

John S. Sensny
Signature

Dated: **January 31, 1997**

John S. Sensny
Reg. No. 28,757

Scully, Scott, Murphy & Presser
400 Garden City Plaza
Garden City, New York 11530
(516) 742-4343

I certify that this document and fee is being deposited on Jan. 31, 1997 with the U.S. Postal Service as first class mail under 37 C.F.R. 1.8 and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

John S. Sensny
Signature of Person Mailing Correspondence

John S. Sensny

Typed or Printed Name of Person Mailing Correspondence

CC:

copy loc
0345 3/7/97

GK
3305



PATENTS

UNITED STATES PATENT AND TRADEMARK OFFICE
Applicant: Christopher
Serial No.: 08/746,360
Filed: November 8, 1996
For: Finite Amplitude Distortion-
Based Inhomogeneous Pulse
Echo Ultrasonic Imaging
Examiner: J. D. S.
Art Unit: 6/30/97
Docket: 9872
Dated: January 31, 1997

Assistant Commissioner for Patents
Washington, DC 20231

RECEIVED
FEB 12 1997
GROUP 3300

INFORMATION DISCLOSURE STATEMENT

Sir:

Applicant submits herewith, as attachments to Form PTO-1449, copies of information which is considered to be pertinent to the invention as claimed in the above-identified application. In particular, Applicant is submitting herewith copies of the following documents:

1. "Second Harmonic Imaging and Harmonic Doppler Measurements With Alburnex," Chang, et. al., 1994 Ultrasonics Symposium, pp. 1551-1554.
2. "In Vivo and In Vitro Ultrasound Beam Distortion Measurements of a Large Aperture and a Conventional Aperture Focussed Transducer," Moshfeghi, et. al., Ultrasound in Med & Biol., Vol.14, No.5, pp. 415-428, 1988.
3. "Physical Acoustics: Ultrasonic Techniques," Makin, J. Acoust. Soc. Am. Vol. 97, No. 5, Pt. 2, May 1995.
4. "Generation of harmonics in a focused Gaussian sound field," Du, et. al., J. Acoust. Soc. Am. 97 (3), pp 1486-1488, March 1995.

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, DC 20231 on January 31, 1997.

Dated: January 31, 1997

John S. Sensny
John S. Sensny

5. "Nonlinear Propagation in Doppler Ultrasound," McDicken, et. al., Ultrasound in Med & Biol., Vol.19, No. 5, pp 359-364, 1993.
6. "Multi-frequency transducer assembly for nonlinear ultrasonic measurements," Wu, et. al., J. Acoust. Soc. Am. 93 (4), Pt. 1, pp. 2231-2234, April 1993.
7. "Errors in attenuation measurements due to nonlinear propagation effects," Zeqiri, J. Acoust. Soc. Am. 91 (5), pp. 2585-2593, May 1992.
8. "Harmonic generation in finite amplitude sound beams from a rectangular aperture source," Kamakura, et. al., J. Acoust. Soc. Am. 91 (6), pp. 3144-3151, June 1992.
- ✓9. "The Enhancement of Second Harmonic Generation In Ultrasonic Microscopic Observation By Triple Transition," Din, et al., 1993 Ultrasonics Symposium, pp. 575-578.
- ✓10. "Non-Linearity and finite amplitude effects," European Journal of Ultrasound, 1 pp. 213-215, 1994.
- ✓11. "Time-shift compensation of ultrasonic pulse focus degradation using least-mean-square error estimates of arrival time," Liu, et al., The Journal of the Acoustical Society of America, Vol. 95, No. 1, pp. 542-555, January 1994.
- ✓12. "Adaptive focusing in scattering media through sound-speed inhomogeneities: The van Cittert Zernike approach and focusing criterion," Mallart, et. al., J. Acoust. Soc. Am. 96 (6), pp. 3721-3732, December 1994.
- ✓13. "Wavefront amplitude distribution in the female breast," Zhu, et. al., J. Acoust. Soc. Am. 96 (1), pp. 1-9, July 1994.
- ✓14. "An experimental investigation of the nonlinear pressure field produced by a plane circular piston," TenCate, J. Acoust. Soc. Am. 94 (2), Pt. 1, pp. 1084-1089, August 1993.
- ✓15. "New approaches to nonlinear diffractive field propagation," Christopher, et. al., J. Acoust. Soc. Am. 90 (1), pp. 488-499, July 1991.
16. "Imaging the Acoustic Nonlinearity Parameter with Finite-Amplitude Sound Waves: The Difference-Frequency Method and the Second-Harmonic Method," Nakagawa, et. al., IEICE Transactions, Vol. E 71, No. 8, pp. 799-809 August 1988.

Respectfully submitted,

John S. Sensny
 John S. Sensny
 Registration No. 28,757

SCULLY, SCOTT, MURPHY & PRESSER
 400 Garden City Plaza
 Garden City, New York 11530
 (516) 742-4343

JSS/